

REMARKS

Reconsideration of the subject patent application is respectfully requested.

At the present time, there are ten (10) claims pending and claims 1, 2, 6, and 7 stand rejected under 35 U.S.C. §102(b) as being anticipated by Nolte. Additionally, claims 4 and 9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Nolte. Claims 3, 5, 8, and 10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Nolte, as applied to claims 2, 4, 7, and 9, and in view of "Tool Engineers Handbook", pages 1228-1229. Claims 4, 5, 9 and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nolte in view of Bien.

There are two independent claims pending in this application, claims 1 and 6, and each independent claim has been rejected under §102(b) based upon the Nolte reference. The Examiner is asked to reconsider the applicability of the Nolte reference in view of the fact that there is a fundamental difference, both in terms of machining practice as well as in terms of the end result, between the contouring of the piston-end portion of the connecting rod in Nolte and the contouring of the bore as recited in claims 1 and 6. For now, the discussion will be limited to independent claims 1 and 6, though the remaining dependent claims are believed to have patentable subject matter in their own right.

In the Nolte reference, the end faces of the piston-end portion of the connecting rod are shaped or contoured in some fashion, as best can be understood from the drawing illustrations. In contrast, and as an important difference, in Applicants' claimed invention, it is the bore that is contoured. As stated, the machining process to contour the end faces is different from that required to contour the bore, but more importantly, the

end result is different and the shaping or contouring practiced in Nolte will not achieve the objective of the claimed invention.

In considering the purpose or objective behind the claimed invention, it is very clearly stated that the intent is to contour the load bearing portion of the bore in order to accommodate pin deflection and to provide a larger area of contact for the load. Machining off part of the end face of the piston-end portion of the connecting rod does not accomplish nor facilitate this objective. Whether an angled cut is made across the end face or whether the end face is machined in some fashion to create a concave surface, the surface that is being modified is the end face and this is not the load-carrying portion of the connecting rod. Machining the end face, as compared to contouring the interior of the bore, are significantly different machining tasks with completely different set ups and completely different results. Machining off the end face of the piston-end portion of the connecting rod does not provide a larger area of contact for the load, just the opposite. It reduces the area of contact for the load.

Perhaps another way to explain this difference is to think in terms of a straight, hollow tube with a cylindrical bore and flat parallel end faces. If the end faces are machined off at an angle or contoured in such a manner as to create a concave shape, the cylindrical nature of the bore is not affected, except to remove material which in turn reduces the area of contact for the load.

It might also be instructive for the Examiner to consider, in the context of a reciprocating connecting rod structure, the nature of the load and the manner in which the load is transmitted through the pin to the connecting rod. As is believed to be well understood, the load that is transmitted through the pin is effectively uni-directional since

it only transmits the load through the lower half of the pin. Accordingly, the question needs to be asked as to why the upper portion of the bore would ever need to be shaped or contoured for the purposes of increasing the load carrying area. Since the Examiner may have assumed that the contouring to the end faces in Nolte somehow contours or shapes the bore, the question remains, why would the upper portion of the bore need to be shaped or contoured as the Examiner thinks is the case with Nolte? There is no load applied to the connecting rod by way of the pin above the pin centerline so why would anyone interpret Nolte as contouring this portion of the bore for additional load carrying surface area?

Claims 1 and 6 each recite language that makes it clear that it is the "bore" that includes the profiled relief portions adjacent each end. The cited Nolte reference only profiles the end face, leaving the bore unchanged, except to possibly reduce the bore surface area.

In view of the obvious differences between Nolte and the claimed invention, claims 1-10 are respectfully requested to be passed to issue.

Respectfully submitted,

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